

### **ABSTRACT OF THE DISCLOSURE**

A method of deriving a prediction model and calculating a predicted lens power to provide a desired post-operative spherical equivalent to correct myopia in a phakic eye of a patient using an intraocular lens includes measuring and  
5 determining the predictive significance of certain pre-operative characteristics of the eye, including cycloplegic and manifest spherical equivalent, vertex distance, anterior chamber depth, axial length, and keratometry. The prediction model is derived using multiple regression analysis on the pre-operative and post operative data. Measured data corresponding to a particular patient is used in the lens power  
10 prediction model to calculate the predicted lens power for implantation in the patient.